Quad Review - Extra Whiteboard Problems

C1 Matches #1-9 from review

1) Describe ~~the~~ transformations of $y = -4(x+2)^2 - 8$

2) Find vertex of $y = 7(x-3)^2 + 4$

3) Find vertex of $y = 2x^2 - 12x + 1$

4) Will the vertex of $y = -4x^2 + 5$ be a maximum or minimum?

C2 Matches #10-20 from review

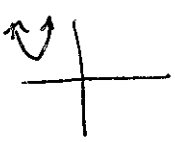
1) Find the axis of symmetry of

A. $y = 2(x+7)^2 - 1$

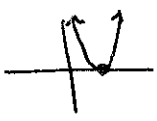
B. $y = x^2 + 7x - 2$

2) Set up $6x^2 + 4x = -13$ so that you can find the solutions. (Don't find them).

3) What can we know about the discriminant of each graph?

A. 

B. 

C 

4) Find the y-intercept of

A. $y = 4x^2 - 6x + 9$

B. $y = 2(x-1)^2 + 4$

Matches
C3 # 21-26 from review

1) Find the solutions of $3x^2 = 108$

2) Find the solutions of $10x^2 = -2x$ by factoring.

3) Draw a parabola that opens down and whose solutions are $x = -4, 3$

C4 # 27-30

1) Find the solutions of $y = 3x^2 + 2x - 5$ using the method of your choice.

2) Find the solutions of $x^2 - 5x = -6$ using the method of your choice.

C5 # 31-35

1) If $f(x) = -2(x+1)^2 - 3$, write a new function $g(x)$ that shifts $f(x)$ 6 units right and 4 units up.

2) Write the equation of a quadratic whose vertex is $(-1, 3)$ through the point $(2, 14)$.

3) Write the equation of a quadratic function whose solutions are -3 and 2.

4) Write the equation of a quadratic that is concave down, skinnier than $y = x^2$, and has a vertex of $(-1, 7)$.

C6 # 36-38

1) Graph $y = -2(x+3)^2 + 5$

2) An object in the air is modeled by $h(t) = -16t^2 + 8t + 10$ where h is height and t is time.

A. When does the object reach its max height?

B. What is the max height?

C. What is the height after 1 second in the air?

D. When will the object hit the ground?

C7 # 39-44

1) What is the value of x in $\sqrt{10+x} = 6i$?

2) $f(x) = 2x^2 + 1$. Find $f(3i)$

3) Simplify $(2+6i) - (4-3i)$

4) Solve $3x^2 = -75$

C8 # 45-50

1) If $8x$ is one factor of $16x^2 + 24x$, what is the other factor?

2) Factor $3x^2 - 48$ completely.

3) What is a common factor of x^2+x-6 and $x^2+7x+12$?

4) Write the equation of the quadratic in the table

x	y
-3	5
-2	-1
-1	-3
0	-1
1	5

Answer key

C1

1) $y = -4(x+2)^2 - 8$ → down 8
   - reflected
   - skinny
   - left 2

2) (3, 4)

3) (3, -17)

4) ∩ Max

C2

1) A. $x = -7$ B. $x = \frac{-7}{2} = -3.5$

2) $6x^2 + 4x + 13 = 0$

3) A. negative $b^2 - 4ac < 0$ B. positive $b^2 - 4ac > 0$

   C. $b^2 - 4ac = 0$

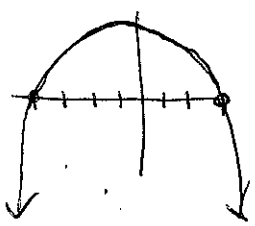
4) A. (0, 9)

   B. (0, 6)

C3

1) $x = \pm 6$

2) $x = 0, \ -\frac{1}{5} = -0.2$

3) 

Answer key

C4

1) $x = -\frac{5}{3}, 1$

$-1.\overline{6}$

2) $x = 2, 3$

C5

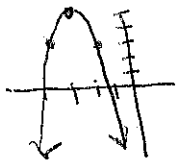
1) $g(x) = -2(x-5)^2 + 1$

2) $y = \frac{11}{9}(x+1)^2 + 3$

3) $y = x^2 + x - 6$

4) $y = -2(x+1)^2 + 7$

C6

1) 

2) A. $t = .25$ seconds

B. $h = 11$ ft

C. 2 ft

D. ≈ 1.08 seconds

Answer key

C7

1) $x = -46$

2) -17

3) $-2 + 9i$

4) $x = \pm 5i$

C8

1) $2x + 3$

2) $3(x+4)(x-4)$

3) $x + 3$

4) $y = 2(x+1)^2 - 3$